

PART I - ADMINISTRATIVE

Section 1. General administrative information

Title of project Walla Walla River Fish Passage Operations	
BPA project number	20139
Contract renewal date (mm/yyyy)	10/01/1999
Multiple actions? (indicate Yes or No)	No
Business name of agency, institution or organization requesting funding Confederated Tribes of the Umatilla Indian Reservation	
Business acronym (if appropriate)	CTUIR
Proposal contact person or principal investigator:	
Name	Gary A. James
Mailing address	P.O. Box 638
City, ST Zip	Pendleton, OR 97801
Phone	(541) 276-4109
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NPPC Program Measure Number(s) which this project addresses 7.10A, 7.4L	
FWS/NMFS Biological Opinion Number(s) which this project addresses N/A	
Other planning document references Wy-Kan-Ush-Mi Wa-Kish-Wit, Volume II. 1995. CRITFC – Walla Walla River, Instream Flow and Passage (II.B.) Walla Walla Subbasin Plan. 1990. CTUIR – Part II, Habitat Protection Needs, Habitat Protection Objectives and Strategies and Part IV, Anadromous Fish Production Plans, Spring Chinook and Summer Steelhead Actions (IA1,2). Draft Walla Walla Annual Operating Plan. 1997. CTUIR – Sections I.-V. Draft Walla Walla Hatchery Master Plan. 1993. CTUIR - Present Rehabilitation Efforts (III.C.), Spring Chinook Broodstock Management (V.B.5), Summer Steelhead Broodstock Management (V.D.5), Existing Facilities (VI.B.4), and Juvenile and Adult Collection and Transportation Facilities (VI.C.1). Reconnaissance Report Walla Walla Basin. 1997. COE – Section 4.01(8) Environmental Restoration, Trap & Haul Program	
Short description Increase survival of migrating juvenile and adult salmon and summer steelhead in the Walla Walla Basin by operating passage facilities, trapping facilities, and transport equipment, to provide	

adequate passage conditions.

Target species

Summer steelhead, spring chinook

Section 2. Sorting and evaluation

Subbasin

Walla Walla

Evaluation Process Sort

<i>CBFWA caucus</i>		<i>CBFWA eval. process</i>		<i>ISRP project type</i>	
<i>X one or more caucus</i>		<i>If your project fits either of these processes, X one or both</i>		<i>X one or more categories</i>	
<i>X</i>	<i>Anadromous fish</i>	<i>X</i>	<i>Multi-year (milestone-based evaluation)</i>		<i>Watershed councils/model watersheds</i>
	<i>Resident Fish</i>		<i>Watershed project eval.</i>		<i>Information dissemination</i>
	<i>Wildlife</i>			<i>X</i>	<i>Operation & maintenance</i>
					<i>New construction</i>
					<i>Research & monitoring</i>
					<i>Implementation & mgmt</i>
					<i>Wildlife habitat acquisitions</i>

Section 3. Relationships to other Bonneville projects

Umbrella / sub-proposal relationships. List umbrella project first.

Project #	Project title/description
20553	Walla Walla River Tributary Fish Passage
20139	Walla Walla Fish Passage Operations (Subject Proposal)
9601100	Walla Walla Juvenile Screens and Traps (Submitted separately)

Other dependent or critically-related projects

<i>Project #</i>	<i>Project title/description</i>	<i>Nature of relationship</i>
8805302	NE Oregon Walla Walla Hatchery Facility	After production begins, provide adequate passage for juveniles released and collect broodstock
9000501	Walla Walla Basin Natural Production M & E	Provide passage for adults and juveniles to and from natural production areas and collect data on

	returning adults
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Section 4. Objectives, tasks and schedules

Past accomplishments

Year	Accomplishment	Met biological objectives?
1998	Provide Technical Input on Passage and Trapping Facility Designs	

Objectives and tasks

Obj 1,2,3	Objective	Task a,b,c	Task
1	Increase the survival of migrating juvenile and adult salmon and steelhead in the Walla Walla Basin	a	Monitor river conditions and passage facilities operation (screens, bypasses, ladders) in the Walla Walla Basin to ensure adequate passage
		b	Operate adult and juvenile trapping facilities on the Walla Walla River

Objective schedules and costs

Obj #	Start date mm/yyyy	End date Mm/yyyy	Measurable biological objective(s)	Milestone	FY2000 Cost %
1	10/2000	09/2001			100 %
				Total	100%

Schedule constraints Completion and funding of project 9601100 listed in Section 3 under Umbrella proposals would significantly enhance and compliment the effectiveness of this project.
Completion date The project is seen as ongoing with no completion date identified (multi-year funding requested).

Section 5. Budget

FY99 project budget (BPA obligated):	\$79,100
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FY2000 budget by line item

Item	Note	% of total	FY2000 (\$)
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20139 Walla Walla River Fish Passage Operations20139 Walla Walla River Fish Passage Operations (under 20553)

Personnel		27.5	22,900
Fringe benefits		8.3	6,900
Supplies, materials, non-expendable property		3.0	2,500
Operations & maintenance		1.3	1,100
Capital acquisitions or improvements (e.g. land, buildings, major equip.)			0
NEPA costs			0
Construction-related support			0
PIT tags	# of tags:		0
Travel		4.8	4,000
Indirect costs		15.1	12,600
Subcontractor		40.0	33,400
Other			0
TOTAL BPA REQUESTED BUDGET			83,400

Cost sharing

Organization	Item or service provided	% total project cost (incl. BPA)	Amount (\$)
Total project cost (including BPA portion)			

Outyear costs

	FY2001	FY02	FY03	FY04
Total budget	88,000	92,000	96,500	101,400

Section 6. References

Watershed ?	Reference
	Columbia River Inter-Tribal Fish Commission. 1995. Wy-Kan-Ush-Mi Wy-Kish-Wit, Spirit of the Salmon. The Columbia River Anadromous Fish Restoration Plan of the Nez Perce, Umatilla, Warm Springs and Yakama Tribes, Volumes I and II. Columbia River Inter-Tribal Fish Commission, Portland, Oregon.
	Confederated Tribes of the Umatilla Indian Reservation, Oregon Department of

	Fish and Wildlife, Washington Department of Fisheries, and Washington Department of Wildlife. 1990. Columbia Basin System Planning, Walla Walla Subbasin, September, 1990. Submitted to Northwest Power Planning Council and Columbia Basin Fish and Wildlife Authority, Portland, Oregon.
	U.S. Army Corps of Engineers, 1997. Walla Walla River Watershed, Oregon and Washington – Reconnaissance Report. U.S. Army Corps of Engineers, Walla Walla District, Walla Walla, Washington.
	Zimmerman, B.C. and B.B. Duke. 1993 through 1998. Trapping and Transportation of adult and juvenile salmon in the Lower Umatilla River in the Northeast Oregon. 1992-1993 through 1997-1998. Project No. 88-022, Contract No. DE-BI79-89BP98636. Bonneville Power Administration, Portland, Oregon. (Multiple annual reports cited in reference).

PART II - NARRATIVE

Section 7. Abstract

In the 1990's, CTUIR and ODFW along with many other agencies have begun implementing fisheries restoration activities in the Walla Walla Basin. An integral part of this effort, as outlined in Section 7.10 of the Fish and Wildlife Program, is to alleviate the inadequate migration conditions in the basin.

This is being addressed by removing diversion dams, constructing fish passage facilities, and initiating trap and haul efforts. The Fish Passage Operations Project objective is to increase adult and juvenile migrant survival in the Walla Walla Basin. The project will provide survival benefits for migrating juveniles and adults by operating and maintaining ladders, screen sites, bypasses, trap facilities, and hauling equipment and coordinating these operations. The project also provides valuable support by refining fish passage criteria and providing technical expertise on passage facility design and operation.

The project began in FY 1998 as a part of the Umatilla River Trap and Haul Project and is being proposed separately in FY 2000. Recommendations based on project observations of migration are incorporated into subbasin management documents and technical recommendations have been included in the design of fish passage facilities in the basin. The project is viewed as a long term O&M project required for maintaining the survival advantages achieved by implementation of the fish passage projects in the basin being constructed under project numbers 9601100.

Section 8. Project description

a. Technical and/or scientific background

The Walla Walla River is heavily diverted for agricultural use. Historically, inadequate flow and passage conditions during critical portions of both adult and juvenile migration periods was the primary contributor to the extirpation of salmon and decline of summer steelhead populations in the Walla Walla Basin.

Over the last few years, CTUIR and ODFW along with WDFW and COE began initiating restoration activities to address these passage concerns. This included removal of irrigation diversion dams, construction of juvenile screens and bypasses and adult ladders, and provisions for trapping and transportation of adults and juveniles.

The project will be responsible for coordination and operation of the overall passage program in the Walla Walla Basin. The project traps and provides physical transportation for adults and juveniles during periods of inadequate flow, operates juvenile screens, bypasses, and adult ladders to optimize migration conditions during adequate flow periods, and coordinates these operations to maximize passage conditions during critical migration periods.

It is assumed that these efforts will provide more adequate passage conditions and increased survival for migrating juveniles and adults. This should, in turn, help in the restoration effort for salmon and steelhead in the basin by ensuring that physical passage conditions are no longer a limiting factor.

The project began in FY 1998 as part of the Umatilla Trap and Haul Project. Project observations of adult and juvenile migration are incorporated into subbasin management documents. In the future, the project will also be responsible for other key components specified in the restoration planning documents identified in Section 1 such as broodstock collection, adult disposition, passage facility O&M, and migration data collection as these other projects are completed. The project leader and assistant project leader have been on the Umatilla Trap and Haul project since 1991 and 1990, respectively. These key personnel also participate in the following related forums; Fish Screening Oversight Committee, Umatilla Technical Work Group, Umatilla River Operations Group, Walla Walla Technical Work Group, Umatilla Management Oversight Committee, and U.S. v. Oregon Production Advisory Committee.

b. Rationale and significance to Regional Programs

As stated in Section 8.a., inadequate passage conditions for both upstream and downstream migrants was the primary contributor to the extirpation of salmon and decline of steelhead in the Walla Walla Basin. Although passage improvements are being implemented, there are still critical times of the year when inadequate migration conditions exist. The goal of the project is to assist in the restoration of salmon and steelhead in the Walla Walla River by increasing survival of migrating adults and juveniles.

The project goal of assisting in the restoration and rebuilding of salmon and steelhead populations in the Walla Walla River is directly related to the Council's mandate to protect, mitigate, and enhance fish and wildlife affected by development and operation of the hydropower system. By increasing migratory survival in the Walla Walla River, the project immediately addresses the Council's goals as listed in the 1994 Fish and Wildlife Program. Improving passage conditions in the basin will help to halt the decline of the summer steelhead population and allow rebuilding of the summer steelhead population and restoration of spring chinook to begin.

The project objective of increasing survival of juvenile and adult migrants by addressing passage

concerns is specifically outlined in Section 7.10 of the 1994 Fish and Wildlife Program. The project provides in place, in kind mitigation for historical losses associated with water diversions in the Walla Walla Basin.

The Walla Walla River Fish Passage Operations Project is part of a comprehensive effort in the basin which involves many different projects including the umbrella sub-proposal listed in Section 3 and the Council funded NEOH Supplementation Project outlined in Section 7.4L of the Fish and Wildlife Program. This comprehensive effort also includes many public and private habitat enhancement efforts as well. The success of these many projects and the overall restoration effort is directly dependent on the ability of the Fish Passage Operations Project to ensure that tributary passage conditions are no longer a limiting factor affecting salmon and steelhead survival in the basin.

c. Relationships to other projects

The Walla Walla Fish Passage Operations Project is one of three critically linked projects that together form the basis for the Walla Walla River Tributary Fish Passage umbrella proposal identified in Section 3. These three projects are dependent on each other in order to meet the passage objectives in the basin. The Adult Passage Improvements and Juvenile Screens and Traps projects provide funding for construction of needed passage improvements in the basin which this project will operate and coordinate as well as providing for maintenance funding of those facilities after construction. Multi-year funding is being requested for these three related projects listed under the Walla Walla River Tributary Fish Passage umbrella.

The Fish Passage Operations Project is a cooperative effort between CTUIR and ODFW which provides an important link between many diverse interest groups involved in restoration efforts. The project provides a "contingency plan" for fish during low flow periods to provide adequate passage opportunity while irrigation demands remain intact. The project coordinates operation of the BPA and COE funded passage facilities with the Oregon Department of Water Resources, Washington Department of Ecology, WDFW, and local irrigation districts to provide adequate flow and fish passage conditions. Daily operation and maintenance of the fish passage facilities is conducted by local irrigation districts under the direction of the project. The project works directly with NMFS, the Army Corps of Engineers, and private engineering consultants to review and provide comments on passage facility designs and operating criteria.

The project will also be directly involved in the production component of the restoration program, as proposed as part of NEOH. In addition to providing safe passage for both natural and hatchery adults and juveniles to and from natural production areas, the project would also be responsible for collecting and transporting broodstock required for artificial production programs and providing data on adult returns and juvenile outmigration for the monitoring and evaluation effort.

d. Project history (for ongoing projects)

The Walla Walla Fish Passage Operations Project began in FY 1998 as part of the Umatilla Trap and Haul Project. A new project number is being assigned for FY 2000. Project budget request for FY 1999 was \$79,109. The project will produce an annual report for FY 1999 which details project

observations on passage conditions and operation of passage facilities along with details of trapping and transportation operations.

The project has continually learned how to more effectively operate and integrate physical passage facilities, trapping facilities, hauling equipment, and flow enhancement programs in the Umatilla Basin to increase the survival of smolts and adults to and from natural production areas. This information, along with that gained from observations of migration and adult returns in the Walla Walla Basin, will be used in turn to make adaptive management recommendations for the Walla Walla River. The project fulfills a critical annual O&M requirement associated with passage improvements being implemented in the basin and is requesting multi-year funding status.

e. Proposal objectives

The project has one objective outlined in its statement of work: To increase the survival of migrating juvenile and adult salmon and steelhead in the Walla Walla River. Since the project is operational in nature rather than research oriented, specific data related to success of the project may be limited.

There are anticipated to be associated monitoring and evaluation efforts which will address isolated aspects of project operations. As in the Umatilla Basin, results from evaluations will be incorporated where appropriate into daily operations of the project. The success of the project will be primarily evaluated on meeting passage criteria established by NMFS and management agencies for the basin.

The project will produce an annual report each year which includes the numbers of fish trapped and hauled, comments on passage facility and equipment operations, pertinent physical and biological data, identified problems, and recommendations on passage operation improvements. The project monthly and annual reports will provide an important adaptive management function by making recommendations to subbasin managers and management documents based on observations of migration and adult returns.

f. Methods

The project has two tasks and seven subtasks all directly related to the project objective of increasing survival of migrating salmon and steelhead in the Walla Walla Basin.

The first task is to monitor river conditions and operation of passage facilities. These are four associated subtasks: 1) monitor flows and river conditions; 2) inspect passage facilities to maintain operating criteria and identify operational and passage concerns; 3) review passage facility designs; and 4) develop an annual operation plan to coordinate passage operations.

The project uses digital recording and handheld thermometers to monitor river temperatures. Flows are monitored by information received from river gauging stations. Time of year, water quality, flow conditions, and irrigation diversions are all factored into decisions regarding operation of the passage facilities and flow enhancement.

Generally, operation of both adult ladders and juvenile screen and bypass passage facilities are guided by criteria developed by NMFS with project recommendations. The project provides review and recommendations of passage facility design and operation based on expertise developed by project staff in the Umatilla Basin and through FSOC.

A critical assumption in the passage program is that natural, volitional migration of upstream and downstream migrants is preferable to transportation and that higher overall survival will result if adequate natural passage conditions exist. Based on that assumption, attempts are made to maximize the time periods and optimize conditions for natural migration. The coordination of passage facility operations with trapping and transportation needs to optimize passage conditions will be incorporated into a basin passage annual operations plan.

The second task involves operation of adult and juvenile trapping facilities. These are three associated subtasks: 1) Operate Little Walla Walla juvenile facility; 2) Provide safe transportation; and 3) Review designs for trapping facilities.

Operation of adult and juvenile trapping facilities are generally conducted under guidelines developed by the project with input from NMFS and other affected agencies. ODFW liberation protocols are used as a general guideline for hauling operations. These protocols have been further refined by the project for use under conditions experienced locally. The project provides review and recommendations of trapping facility designs and operations based on expertise developed by project staff in the Umatilla Basin.

Environmental conditions are the overriding factor in the success of the project. During drought years, low water flows extend the period when inadequate passage conditions exist and require a more extensive hauling effort. In addition to smaller time frames for volitional migration, low flows also mean poor water quality conditions under which fish are to be trapped and hauled which results in lower survival rates.

g. Facilities and equipment

The juvenile and adult trapping and passage facilities in the Walla Walla Basin are inadequate to perform the anticipated tasks and need to be refurbished. The rehabilitation and construction of the required facilities in the Walla Walla Basin is occurring under project 9601100. Once these two projects are completed, facilities should be adequate to perform the anticipated tasks.

Available transportation equipment includes one 3,000 gallon and two 370 gallon fish liberation units from the Umatilla Fish Passage Operations Project. The 3,000 gallon unit is a diesel operated tractor-trailer equipped with a 12 inch discharge opening and two holding chambers capable of isolating two groups in the same load. The unit has both liquid oxygen and electric aeration systems. The two 370 gallon units are mounted on dual axle trailers and are towed by pick-up trucks. Each unit has compressed gas aeration and a recirculation system. Both units have eight inch discharge openings. The project currently has sufficient office space, shop availability, and support vehicles. The project also has two computers which are adequate for project recordkeeping and data assimilation requirements. No additional high cost capital items are anticipated to be needed by the project.

h. Budget

It has been estimated that the passage operations effort in the Walla Walla Basin will require approximately 25% of the effort currently being expended in the Umatilla Basin. This includes an economy of scale savings since this project will be implemented by the Umatilla Fish Passage Operations staff and will utilize both personnel and equipment from that project. Due to the critical annual need for the project, multi-year funding is being requested.

Personnel – These costs are estimated based on effort required for biologists and fisheries technicians to operate traps on a seasonal basis and to monitor passage facilities and river conditions weekly. The adult trap at Nursery Bridge is operated intermittently from March – May and it is anticipated that the juvenile trap at Little Walla Walla will be operated only during the late spring and summer. Monitoring of passage facilities and river conditions will occur about 1 day per week. There are additional anticipated costs for project biologists to review and comment on passage facility designs and to develop an annual operations plan.

Fringe – Standard CTUIR rate.

Supplies – Miscellaneous field supplies such as nets and brushes will be needed for screen and juvenile trap sites.

Operations and Maintenance – This figure will be low for the first few years since most of the facilities and equipment will be new. Some money is required in case of unanticipated breakdowns or modifications.

Travel – These costs are associated with GSA vehicle rental, mileage charges and insurance.

Indirect Costs – Standard CTUIR rate.

Subcontractor – These costs are for ODFW's share of the project and are proportional to the same budget items listed above for CTUIR.

Section 9. Key personnel

Brian C. Zimmerman

Fish Passage/Artificial Production Biologist

20139 Walla Walla River Fish Passage Operations 20139 Walla Walla River Fish Passage Operations (under 20553)

Employment

1991 - Present

Confederated Tribes of the Umatilla Indian Reservation, Pendleton, Oregon

Fish Passage Operations Project Leader (0.75 FTE)

Oversee all project activities including monitoring of flow and passage conditions; coordination and operation of passage facility and flow enhancement projects; operation of adult and juvenile trapping facilities; fish transportation; fish disposition and broodstock collection; development of annual operating budget; data collection and assimilation; and production of monthly and annual reports. Serves on Fish Screening Oversight Committee, Production Advisory Committee, Umatilla Management Oversight Committee, Umatilla and Walla Walla Technical Work Groups, and Umatilla River Operations Group.

1989 - 1991

Paradise Bay Seafarms, Port Townsend, Washington

Production Manager

Supervised all aspects of production programs at three hatcheries, two net pen sites, and two adult capture stations. Responsibilities included design, coordination, and implementation of captive brood and conventional production programs; budget and contract development; scheduling and logistics of fish transportation program; facility design, startup, and modification; data compilation and analysis; research and technical program development; and interagency and community interaction.

1988 - 1989

Anadromous Incorporated, Coos Bay, Oregon

Saltwater Facilities Manager

Responsible for all aspects of daily facility operation and program implementation at two saltwater release/recapture facilities, one net pen site, and one freshwater hatchery.

1983 - 1988

Anadromous Incorporated, Corvallis/Klamath Falls, Oregon

Assistant Freshwater Facilities Manager

Assisted manager in supervising all aspects of daily facility operation and program implementation at two freshwater hatcheries.

Publications

Have co-authored last 8 Umatilla Trap and Haul annual reports.

Education

Graduated Cum Laude, 1979, Humboldt State University

Bachelor of Science Degree in Fisheries Science

William B. Duke

Fish and Wildlife Technician III

20139 Walla Walla River Fish Passage Operations20139 Walla Walla River Fish Passage Operations (under 20553)

Employment

1990 - Present

Oregon Department of Fish and Wildlife, Pendleton, Oregon

Asst. Fish Passage Operations Project Leader (1.0 FTE)

Assists project leader in oversight of all project activities including monitoring of flow and passage conditions; coordination and operation of passage facility and flow enhancement projects; operation of adult and juvenile trapping facilities; fish transportation; fish disposition and broodstock collection; data collection; and production of monthly and annual reports. Also responsible for operation and maintenance of project transport equipment and assists in development of basin annual operating plan. Serves on Umatilla Management Oversight Committee, Umatilla and Walla Walla Technical Work Groups, and Umatilla River Operations Group.

1988 - 1990

Oregon Department of Fish and Wildlife, Enterprise, Oregon

Fish and Wildlife Technician I

Involved in all aspects of daily operations at Wallowa Hatchery including spawning, incubation, and rearing of rainbow trout and summer steelhead; operation of hatchery equipment; maintenance of grounds and equipment; and maintaining fish production records.

1985 - 1988

Oregon Department of Fish and Wildlife,
Enterprise/LaGrande/Clackamas, Oregon

Experimental Biological Aide

Involved in three different projects including summer steelhead creel survey and radio tracking; kokanee creel survey and stomach analysis; and mark/recapture study for walleye, squawfish and smallmouth bass.

1983 - 1984

Battelle Northwest Laboratories, Richland, Washington
Technician

Participated in all aspects of a juvenile salmonid migration study including juvenile collection and stomach analysis.

Publications

Have co-authored all 9 Umatilla Trap and Haul annual reports and 4 Umatilla Hatchery and Basin Annual Operation Plans.

Education

Graduated 1984, Oregon State University

Bachelor of Science Degree in Fisheries

Section 10. Information/technology transfer

The technical information obtained by the project is disseminated by means of project monthly and annual reports, through basin technical, scientific, and operational group meetings, and by informal interagency and inter-project communication (field meetings, memorandums, and personal communication) which is incorporated into other more formal report formats developed by these other sources.

Congratulations!